

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Inspection Report
Date: 12/07/2012

Fayetteville Regional Office
Sampson County Leachate Management Facility
NC Facility ID 8200150
County/FIPS: Sampson/163

<p align="center">Facility Data</p> <p>Sampson County Leachate Management Facility 7434 Roseboro Highway Roseboro, NC 28382 Lat: 34d 57.7022m Long: 78d 26.3841m SIC: 4953 / Refuse Systems NAICS: 562212 / Solid Waste Landfill</p>			<p align="center">Compliance Data</p> <p>Inspection Date 12/06/2012 Inspector's Name Mitch Revels Operating Status Operating Compliance Code Compliance - inspection Action Code FCE On-Site Inspection Result Compliance</p>					
<p align="center">Contact Data</p> <table border="1"> <tr> <td> <p align="center">Facility Contact</p> <p>Patrick Woodhull Project Manager (419) 425-6175</p> </td> <td> <p align="center">Authorized Contact</p> <p>Steve Martin VP - Shaw Solid Waste Services (225) 987-7133</p> </td> <td> <p align="center">Technical Contact</p> <p>Scott Furlong (412) 858-3935</p> </td> </tr> </table>			<p align="center">Facility Contact</p> <p>Patrick Woodhull Project Manager (419) 425-6175</p>	<p align="center">Authorized Contact</p> <p>Steve Martin VP - Shaw Solid Waste Services (225) 987-7133</p>	<p align="center">Technical Contact</p> <p>Scott Furlong (412) 858-3935</p>	<p align="center">Permit Data</p> <p>Permit 10212 / R00 Issued 12/20/2011 Expires 11/30/2016 Classification Small Permit Status Active</p>		
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<p>Inspector's Signature: <i>Mitchell Revels</i></p> <p>Date of Signature: <i>Dec. 14 2012 RPH</i></p>			<p>Comments:</p>					

This facility has no ICE and therefore NESHAP 40 CFR 63, Subpart ZZZZ does not apply.

(I) DIRECTIONS: The Sampson County Leachate Management Facility (06/82-00150) is located at 7434 Roseboro Highway, Roseboro, Sampson County. There are 4 permitted facilities at this address, (Sampson County LF, Sampson County Disposal LF, Black Creek Renewable Energy) all Title V and Sampson County Leachate Management, a small permitted facility. From FRO: Take Grove Street East; it becomes Rt 24 after crossing Rt 301. Go through Roseboro. The landfill entrance is approx 4 miles past Roseboro, on the left. After entering, bear right, this facility is located beside the flare for the Sampson County Landfill. The landfill manager's office is in a brick building on the right past the scale house.

Safety Concerns and Equipment: This facility usually can be inspected without significant safety risk. Therefore the basic safety equipment of safety shoes, eye protection, and hearing protection should be accessible during inspection.

(II) FACILITY DESCRIPTION: Sampson County Leachate Management Facility, located in Roseboro, Sampson County, operates a facility that evaporates leachate from the Sampson County Disposal MSW LF (Active) [premise 82-00139]. This facility has been installed, owned, and operated by Shaw Environmental & Infrastructure, Inc. (Shaw). The Direct Discharge E-Vap Brand Leachate Evaporation System consists of an evaporator and a clarifier. The evaporator can burn Landfill Gas from both landfills, however presently it is burning LFG, as a process fuel, from the County LF. The combustion gases from the evaporator will be used to sparge the leachate to drive off excess water; with the water vapor being discharged to the atmosphere. The evaporator and clarifier combination reduces the Leachate by as much as 97%. The concentrated residuals are distributed over the open face of the active landfill or hauled off for disposal. The evaporator is a permitted source due to the products of combustion of LFG. The clarifier is insignificant since it has no emissions. The facility is classified as small for permitting purposes.

(III) INSPECTION SUMMARY: On 6 December 2012, I, Mitchell Revels visit this facility. The facility was operating around full capacity. This capacity is actually controlled by the permit limit of 34,000 gallons/day annual average of leachate processed rather than burner Btu capacity. This limit was established per 15A NCAC 2D .1100 "Control of Toxic Air Pollutants".

I met with Bryan Wuester, Landfill Manager for Waste Industry, Matt Lamb, a consultant with RSG Smith and Charles Pare, Project Manager with Shaw. Mr. Charles Pare operates this facility. The primary points of discussion with Mr. Pare were:

- The general operation of the facility, leachate flow, burner operation, residual handling and recordkeeping. The residual (solids from leachate) returned to active LF.
- The permit and the annual reporting requirement for the average annual leachate processed.
- The leachate is generated from the active landfill and the combustion gas from the closed landfill.
- The county flare operating on about 28 acfm of landfill gas and the E-VAP process burning around 550-560 acfm of LFG.
- His 15 years of experience with the process, he has worked at other LF leachate evaporation facilities and indicated that Shaw operates many others throughout the country.

Mr. Pare showed me the process control equipment and the recordkeeping modules. He explained how the annual daily average limit of 34,000 gallons was exceeded for a few days since operation began. However, he was very knowledgeable that this is an annual average and that his annual average is within his permit limit. He said that he was presently evaporating around 31,500 gpd. The process has two exhaust stacks. The stacks were observed with a large amount of steam exhausting to atmosphere. There was a faint leachate odor present inside the E-VAP room.

(IV) PERMITTED EMISSION SOURCES:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
LE-1	<p>One Landfill Gas (LFG) fired Leachate Evaporator (16 million Btu/hour maximum heat input)</p> <p>Inspection Note <u>This process is mainly limited by permit limit of 34,000 gallons per day annual average. The facility was observed operating around 31,500 gpd.</u></p>	N/A	N/A

(V) APPLICABLE AIR QUALITY REGULATIONS:

PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0515 "Particulates from Miscellaneous Industrial Processes," Based on the allowable calculation, the allowable PM is around 13.5 pounds per hour. The potential PM as calculated in permit review is around 5 pounds per hour.
Appears In Compliance based on permit review and E.F.

SULFUR DIOXIDE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions from Combustion Sources,"
Appears in Compliance; EPA AP-42 indicates that LFG has very little Sulfur resulting in emissions of SO2 well within 2.3 pounds of SO2 per million Btu of heat input.

VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions,"

Appears in Compliance; No VE was observed from E-VAP exhaust stacks. A significant amount of steams was observed, however steam is not an air pollutant. The steam plume dissipated quickly.

NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535

Appears in Compliance; No instances of malfunctions have occurred. Little to no malfunctions resulting in excess emissions is expected from this source. Facility only has a process limitation of 34,000 gals/day annual average for NC Toxic rule.

FUGITIVE DUST CONTROL REQUIREMENT - As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources,"

Appears in Compliance; No fugitive dust was observed at this facility. Only one full-time employee with very limited traffic. The

TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT -

Pursuant to 15A NCAC 2D .1100 "Control of Toxic Air Pollutants,"

Appears in Compliance; The facility operator, Charles Pare showed records indicating compliance on this 34,000 gals/day annual average process limit. The TAP modeling demonstration indicate compliance based on this limit.

CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions"

Appears in Compliance; Very little odor was observed at this facility. Mostly detected inside the process room. None was noticed off-site.

(VI) PERMIT EXEMPT EMISSION SOURCES:

Source	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
I-LCT - Leachate Clarifier Tank	2Q .0102 (c)(2)(E)(i)	Yes	Yes

(VII) PREVENTION OF ACCIDENTIAL RELEASES – SECTION 112(r):

This facility is not subject to 112r.

Appears in Compliance; Facility has no source subject to 112r.

(VIII) FIVE YEAR COMPLIANCE HISTORY:

This facility is a Greenfield in construction, Therefore no compliance issues have occurred in the past five years.

(IX) CONCLUSIONS / RECOMMENDATIONS:

(1) Conclusion: At the time of the inspection, the facility was operating just below the permit limitation of 34,000 gals/day annual average. This limitation is based on toxics.

/mrm

cc: FRO files